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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,731	09/19/2001	Jordi Ribas-Corbera	3030	9471

26119 7590 07/18/2006

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EXAMINER	
AN, SHAWN S	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/955,731	RIBAS-CORBERA ET AL.	
	Examiner	Art Unit	
	Shawn S. An	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 April 1106*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *67-132* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *67-132* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. The request filed on 4/11/06 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/955,731 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. As per Applicant's instructions as filed on 4/11/06, claims 67-132 have been newly added, and claims 1-66 have been canceled.

Response to Remarks

3. Applicant's arguments with respect to newly added claims as above have been carefully considered but are moot in view of the new ground(s) of rejection incorporating the previously cited prior art references.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 67-77, 80, 82-84, 89, 92-96, 99-100, 102-103, 105, 108-109, 112-113, 115, 121-122, 125, and 128-132 are rejected under 35 U.S.C. 102(b) as being anticipated by Ozkan et al (5,933,451).

Regarding claims 67, 70, 92, 99, 108, 112, 121, 128, 130, and 132, Ozkan et al discloses a computer implemented method, a computer readable medium storing

programs for causing a computer system to perform a method (col. 5, lines 63-67; col. 6, lines 1-29), and a system comprising:

receiving a number parameter that indicates how many sets of reference decoder parameters being provided for the given video of a single bit stream (col. 9, lines 10-36; Col. 11, lines 1-57);

a module for receiving multiple sets of reference decoder parameters provided for given video of a single video bitstream, wherein each of the multiple sets comprise a rate parameter (R_{min}, R_{max}) and a decoder buffer size parameter (buffer size), and wherein each of the multiple sets represents a different point along a rate-decoder buffer size curve for the given video (Equations 7 and 8)(col. 10, lines 54-67; col. 11, lines 1-17);

a module for determining an operating condition using any of the multiple sets, wherein the operating conditions indicates peak rate or decoder buffer size for decoding encoded data for the given video, and wherein the multiple sets are concurrently available for use in the determining the operating conditions (col. 10, lines 54-67; col. 11, lines 1-17); and

at a decoder, receiving and decoding the encoded data for the given video in accordance with the operating condition (col. 11, lines 18-55).

Regarding claims 68-69, 93-94, 109, 122, and 129, Ozkan et al discloses the decoder buffer size and the rate parameter for each of the multiple set being different (col. 10, lines 54-67; col. 11, lines 1-17)

Regarding claims 71 and 96, Ozkan et al discloses receiving multiple additional sets of reference decoder parameters (R_{min}, R_{max}; Encoder Buffer Size, E);

re-determining the operating condition using any of the multiple additional sets, (col. 10, lines 54-67; col. 11, lines 1-17); and

at the decoder, receiving and decoding the encoded data for the given video in accordance with the re-determined operating condition (col. 11, lines 18-55).

Regarding claims 72 and 95, Ozkan et al discloses receiving a number parameter that indicates how many sets of reference decoder parameters being provided for the given video (col. 9, lines 10-36; Col. 11, lines 1-57).

Regarding claim 73, Ozkan et al discloses selecting a parameter of one of the multiple received sets (col. 10, lines 54-67; col. 11, lines 36-57).

Regarding claims 74-75, 113, 125, and 131, Ozkan et al discloses interpolating between parameters of two of the multiple sets (Eq. 8, encoder buffer size *En)* (col. 10, lines 54-67), and extrapolating from a parameter of one of the multiple sets (Eq. 7, encoder buffer size *E)* (col. 10, lines 54-67).

Regarding claims 76-77, Ozkan et al discloses min peak rate and setting the min peak rate based upon at least one of the decoder buffer size parameters, and setting the decoder buffer size based upon at least one of the rate parameters of the multiple sets (Col. 11, lines 1-57; see also Eq. 8).

Regarding claim 80, Ozkan et al discloses parameters comprising initial buffer fullness data (col. 11, lines 36-55).

Regarding claims 82 and 102, Ozkan et al discloses each of the multiple sets represents a different point along a rate-decoder buffer size curve for the given video (Equations 7 and 8).

Regarding claims 83-84 and 103, Ozkan et al discloses an entire and part of a video sequence (col. 4, lines 63-67; col. 5, lines 1-8).

Regarding claims 89, 105, and 115, Ozkan et al discloses the peak (max) rate corresponding to a transmission rate for a network connection during decoding the encoded data (col. 10, lines 27-37).

Regarding claim 100, Ozkan et al discloses an initial buffer fullness parameters (col. 10, lines 54-67; col. 11, lines 1-17).

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 79, 81, 85-88, 90-91, 97, 101, 104, 106-107, 110, 114, 116, 124, and 126-127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozkan et al (5,933,451).

Regarding claims 79, 97, 110, and 124, the Examiner takes official notice that a pre/post processor such as band (low or high) pass filter is well known in the art for filtering video comprising a single video bitstream or multiple bitstreams.

Therefore, it would have been considered obvious to one of skill in the art employing Ozkan's reference to recognize the number parameter and the multiple sets could be provided as signaled out of band for the given video for filtering purposes as desired by an user/designer.

Regarding claims 81 and 101, the Examiner takes official notice that utilizing leaky bucket model for buffer management is well known in the art. Note: see Eyuboglu et al (5,541,852) (Fig. 8, 802).

Therefore, it would have been considered obvious to one of skill in the art employing Ozkan's reference to recognize the each of the multiple sets could represent a different leaky bucket model for given video for an obvious reason of buffer management.

Regarding claims 85-87 and 126, the Examiner takes official notice that a decoder being implemented in such as a handheld computing device, a PC, and a disk media player is well known in the art for decoding compressed video for displaying video images.

Therefore, it would have been considered obvious to one of skill in the art employing Ozkan's reference to recognize the decoder could easily be implemented in such as a handheld computing device, a PC, and a disk media player for decoding compressed video data for displaying reconstructed video images.

Regarding claims 88, 104, and 114, Ozkan et al discloses the peak (maximum) rate corresponding to a transmission rate for a network connection during decoding the encoded data (col. 10, lines 27-37).

Furthermore, the Examiner takes official notice that utilizing a disk drive as a storage device is well known in the art.

Moreover, Ozkan further discloses a bit rate allocator comprising (Fig. 1, 30) plurality of storage devices (32 and 33), the microprocessor (31), and I/O (34).

Therefore, it would have been considered obvious to one of skill in the art employing Ozkan's reference to recognize the peak rate corresponding to a drive speed for a disk during decoding the encoded data in order to prevent the buffer overflow and/or underflow.

Regarding claims 90-91, 106-107, 116, and 127, the Examiner takes official notice that decoding the encoded data during live video (real time) transmission and during on-demand transmission for the given video is well known in the art for an obvious reason of decoding encoded video for displaying video images during real time (live) and/or during on-demand such as requested by a plurality of subscribers of cable or satellite system.

Therefore, it would have been considered obvious to one of skill in the art employing Ozkan's reference to recognize decoding the encoded data during live video (real time) transmission and on-demand transmission for the given video for an obvious reason of decoding encoded video for displaying video images during real time (live) and/or during on-demand transmission such as requested by a plurality of subscribers of cable or satellite system.

8. Claim 117-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozkan et al (5,933,451) in view of Eyuboglu et al (5,541,852).

Regarding claim 117, Ozkan et al discloses a computer implemented method comprising:

receiving multiple sets of reference decoder parameters provided for given video of a single video bitstream, wherein each of the multiple sets comprise a rate parameter (R_{min}, R_{max}) and a decoder buffer size parameter (buffer size);

processing the multiple sets, wherein the multiple sets are concurrently available for use in the determination of the operating conditions, and wherein the operating conditions indicates peak rate or decoder buffer size for decoding encoded data for the given video (col. 10, lines 54-67; col. 11, lines 1-17);

receiving multiple additional sets of reference decoder parameters (R_{min}, R_{max}; Encoder Buffer Size, E) signaled for the given video of the single video bit stream, and

processing the multiple additional sets, wherein the multiple additional sets are concurrently available for use in re-determination of the operating conditions (col. 10, lines 54-67; col. 11, lines 1-55).

Ozkan et al does not seem to disclose multiple sets and additional multiple sets representing a different leaky bucket model for the given video.

However, Eyuboglu et al teaches variable bit-rate packet video communication system utilizing leaky bucket model for buffer management for given video of a single video bitstream (Fig. 8, 802).

Therefore, it would have been considered obvious to a person of ordinary skill in the relevant art employing Ozkan's method to incorporate the Eyuboglu's teaching so that Ozkan's multiple sets and additional multiple sets represent a different leaky bucket model for the given video as an efficient way to manage buffer data flow.

Regarding claim 118, Ozkan et al discloses the decoder buffer size and the rate parameter for each of the multiple set being different (col. 10, lines 54-67; col. 11, lines 1-17).

Regarding claim 119, Ozkan et al discloses interpolating between parameters of two of the multiple sets (Eq. 8, encoder buffer size *En)* (col. 10, lines 54-67), and extrapolating from a parameter of one of the multiple sets (Eq. 7, encoder buffer size *E)* (col. 10, lines 54-67).

Regarding claim 120, Ozkan et al discloses setting the peak rate based upon one or more of the decoder buffer size parameters of the multiple sets, or setting the decoder buffer size based upon at least one of the rate parameters of the multiple sets (Col. 11, lines 1-57; see also Eq. 8).

9. Claim 78, 98, 111, and 123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozkan et al (5,933,451) in view of Morris (6,873,629).

Regarding claims 78, 98, 111, and 123, Ozkan et al does not seem to disclose multiple sets being provided in a stream header of the single video bit stream.